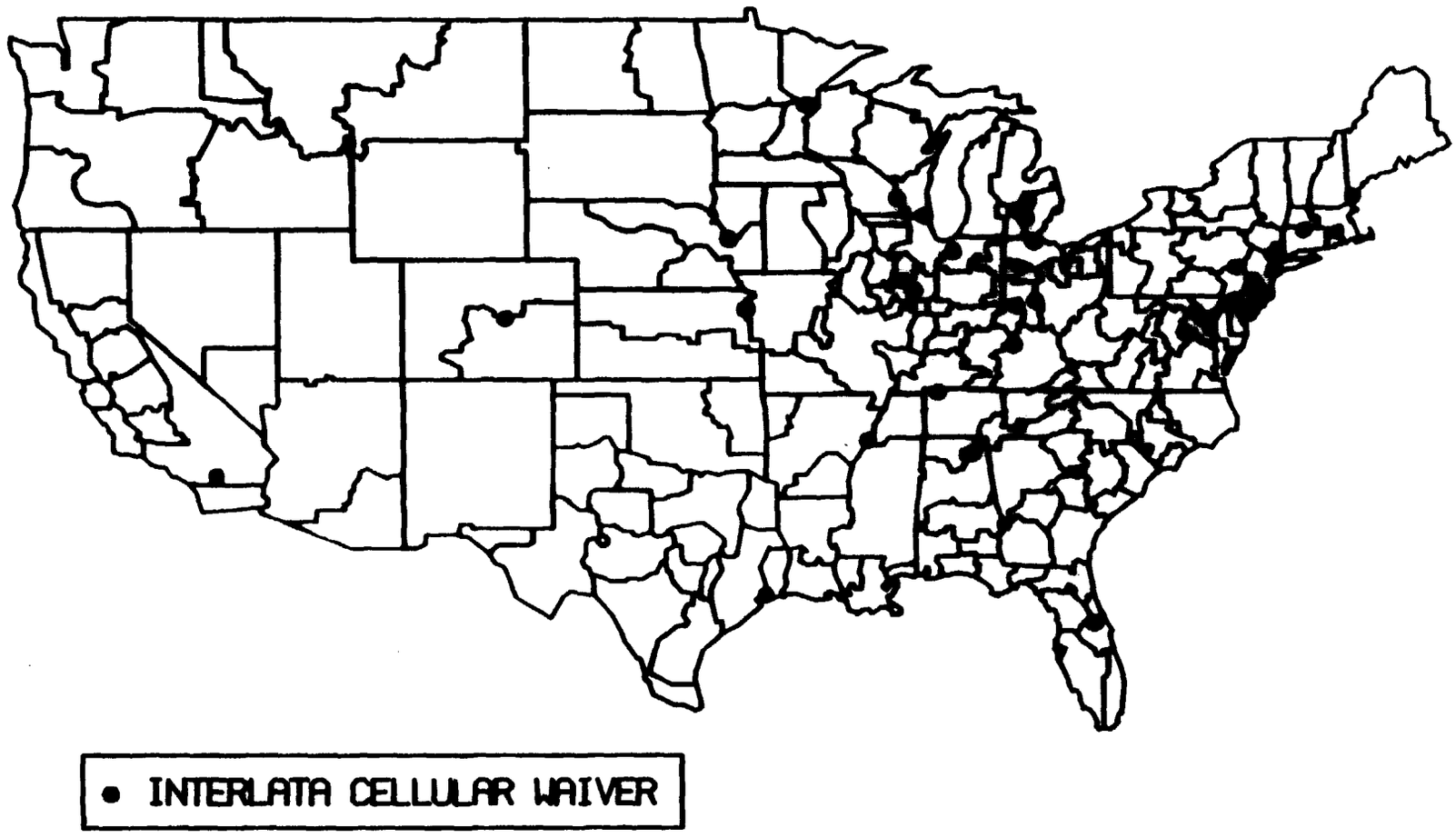
Table 2.7. Cellular Waiver Requests.

Company	DOJ	Court	Disposition	Notes
AT&T	–	May 19, 1983	Nov. 1, 1983	Granted
US West	Aug. 23, 1984	Aug. 27, 1984	Dec. 14, 1984	Granted
Ameritech	Sept. 7, 1984	Feb. 14, 1985	Aug. 16, 1985	Granted
US West	Oct. 2, 1984	Feb. 14, 1985	Aug. 16, 1985	Granted
Bell Atlantic	Nov. 9, 1984	Apr. 5, 1985	June 25, 1985	Granted
NYNEX	Feb. 8, 1985	Sept. 24, 1986	Jan. 28, 1987	Granted
NYNEX	Feb. 9, 1985	June 28, 1985	Mar. 13, 1986	Granted
Southwestern Bell	Feb. 22, 1985	May 21, 1985	Aug. 16, 1985	Granted
BellSouth	Mar. 21, 1985	May 21, 1985	Aug. 16, 1985	Granted
Pacific Telesis	Mar. 21, 1985	Oct. 30, 1986	Feb. 24, 1987	Granted
Pacific Telesis	Apr. 10, 1985	July 26, 1985	Nov. 5, 1985	Granted
NYNEX	June 6, 1985	June 28, 1985	Aug. 16, 1985	Granted
Pacific Telesis	July 1, 1985	Dec. 9, 1985	Feb. 26, 1986	Granted in part
Bell Atlantic	Oct. 22, 1985	Jan. 24, 1986	Apr. 8, 1986	Granted
US West	Dec. 6, 1985	Feb. 26, 1986	Apr. 11, 1986	Granted
Bell Atlantic	Dec. 13, 1985	Aug. 12, 1988	Feb. 15, 1991	Granted
BellSouth	May 15, 1986	Oct. 3, 1988	Oct. 31, 1988	Granted
Southwestern Bell	June 30, 1986	Nov. 26, 1986	Sept. 22, 1987	Granted
Bell Atlantic	July 22, 1986	Feb. 1, 1989	Sept. 28, 1990	Granted
Southwestern Bell	Aug. 26, 1986	Feb. 1, 1989	Sept. 28, 1990	Procedure established for granting waiver pending further information
Bell Atlantic	Oct. 24, 1986	Feb. 23, 1988	Feb. 2, 1989	Granted
Bell Atlantic	Oct. 24, 1986	Aug. 15, 1988	Sept. 12, 1990	Granted
Ameritech	Nov. 12, 1986	June 15, 1988	Sept. 6, 1988	Granted
NYNEX	Nov. 25, 1986	May 9, 1988	Sept. 6, 1988	Granted
Southwestern Bell	Feb. 2, 1987	Dec. 23, 1987	Mar. 31, 1988	Granted
Pacific Telesis	Feb. 11, 1987	Aug. 12, 1988	Nov. 14, 1988	Granted
BellSouth	Feb. 29, 1987	Sept. 30, 1988	Feb. 2, 1989	Granted
BellSouth	Feb. 29, 1987	Sept. 30, 1988	Feb. 2, 1989	Granted
BellSouth	Apr. 10, 1987	June 15, 1988	Sept. 6, 1988	Granted
NYNEX	May 4, 1987	July 5, 1988	Sept. 6, 1988	Granted
NYNEX	May 4, 1987	Aug. 15, 1988	Sept. 12, 1990	Granted
NYNEX	May 29, 1987	Aug. 15, 1988	Feb. 15, 1991	Granted
NYNEX	June 4, 1987	Sept. 30, 1988	Sept. 12, 1990	Granted
Bell Atlantic	June 30, 1987	June 15, 1988	Sept. 6, 1988	Granted
BellSouth	July 21, 1987	Sept. 30, 1988	Feb. 2, 1989	Granted
Southwestern Bell	Aug. 7, 1987	Aug. 12, 1988	Sept. 12, 1990	1 Year Grant
BellSouth	Oct. 8, 1987	Jan. 16, 1990	Sept. 12, 1990	Granted
Ameritech	Oct. 20, 1987	July 5, 1988	Sept. 6, 1988	Granted
US West	–	July 29, 1988	Sept. 6, 1988	Granted
Ameritech	Oct. 20, 1987	Aug. 15, 1988	Sept. 12, 1990	Granted
Bell Atlantic	Nov. 19, 1987	Sept. 30, 1988	Sept. 12, 1990	Granted
US West	Nov. 20, 1987	June 15, 1988	Sept. 6, 1988	Granted
NYNEX	Dec. 29, 1987	Sept. 30, 1988	Sept. 12, 1990	Granted
US West	Jan. 11, 1988	Sept. 30, 1988	Feb. 2, 1990	Granted
Pacific Telesis	May 9, 1988	Aug. 12, 1988	Sept. 12, 1990	1 Year Grant
US West	June 3, 1988	Aug. 12, 1988	Sept. 12, 1990	1 Year Grant
BellSouth	June 8, 1988	Sept. 30, 1988	Sept. 12, 1990	Granted in part
US West	June 14, 1988	Sept. 30, 1988	Feb. 2, 1989	Granted
Southwestern Bell	July 21, 1988	Aug. 12, 1988	Sept. 12, 1990	1 Year Grant
BellSouth	Aug. 11, 1988	Sept. 19, 1988	Sept. 12, 1990	1 Year Grant
BellSouth	Aug. 11, 1988	Sept. 30, 1988	Sept. 12, 1990	Granted in part
Pacific Telesis	Aug. 12, 1988	Feb. 1, 1989	Sept. 28, 1990	Procedure established for granting waiver pending [illegible]
BellSouth	Sept. 13, 1988	Jan. 16, 1990	Sept. 12, 1990	Granted in part
Southwestern Bell	Sept. 21, 1988	Sept. 28, 1989	Apr. 10, 1990	Withdrawn by Southwestern Bell as moot
Pacific Telesis	Sept. 28, 1988	Feb. 20, 1990	Sept. 12, 1990	Remand to Department of Justice
Pacific Telesis	Sept. 27, 1988	Feb. 20, 1990	Sept. 12, 1990	1 Year Grant
Pacific Telesis	Sept. 27, 1988	Feb. 20, 1990	Sept. 12, 1990	1 Year Grant
Pacific Telesis	Nov. 17, 1988	Feb. 20, 1990	Sept. 12, 1990	1 Year Grant
NYNEX	Dec. 6, 1988	Jan. 16, 1990	Sept. 12, 1990	Granted
Bell Atlantic	Dec. 12, 1988	Jan. 16, 1990	Sept. 12, 1990	Granted
Pacific Telesis	Jan. 5, 1989	Feb. 20, 1990	Sept. 12, 1990	1 Year Grant
Bell Atlantic	Feb. 17, 1989	Nov. 16, 1990	Feb. 15, 1991	Granted
NYNEX	Mar. 14, 1989	Jan. 16, 1990	Sept. 12, 1990	Granted
Southwestern Bell	Mar. 27, 1989	Nov. 16, 1990	Apr. 10, 1990	Withdrawn by Southwestern Bell as moot
Pacific Telesis	Aug. 29, 1989	Nov. 8, 1990	Dec. 8, 1990	Granted pursuant to court's 9/28/90 order
BellSouth	Sept. 15, 1989	Jan. 16, 1990	Sept. 12, 1990	Granted in part
Bell Atlantic	Dec. 15, 1989	Feb. 2, 1990	Apr. 6, 1990	Granted
BellSouth	–	June 18, 1990	Sept. 12, 1990	Remand to Department of Justice
RHCs	–	June 18, 1990	Sept. 12, 1990	1 Year Grant

Table 2.8. District Court Decisions on Cellular Service Waivers.

Date Granted	Location	Requestor
Nov. 1, 1983	New York Philadelphia Boston, Worcester, Providence Baltimore, Washington, D.C. Milwaukee, Racine, Kenosha Memphis, West Memphis Cincinnati, Columbus, Dayton Detroit, Toledo Omaha, Western Iowa	AT&T
Dec. 14, 1984	Gulf of Mexico (modified Mar. 24, 1986)	US West
June 25, 1985	Washington, D.C.-Baltimore	Bell Atlantic
Aug. 16, 1985	Monitoring and Consulting Services in the United States	Ameritech BellSouth NYNEX Southwestern Bell US West
Nov. 5, 1985	Monitoring and Consulting Services in the United States	Pacific Telesis
Feb. 26, 1986	Communications Industries Acquisition	Pacific Telesis
Mar. 13, 1986	Cellular Resale in Connecticut	NYNEX
Apr. 8, 1986	Monitoring and Consulting Services in the United States	Bell Atlantic
Apr. 11, 1986	San Diego, CA	US West
Oct. 31, 1986	Joint Venture with MCCA	BellSouth
Jan. 28, 1987	Long Island, New Brunswick, Bridgeport	NYNEX
Feb. 24, 1987	Los Angeles, CA	Pacific Telesis
Sept. 22, 1987	Metromedia Acquisition: Chicago; Gary; Washington, D.C.; Baltimore	Southwestern Bell
Mar. 31, 1988	Topeka and Lawrence, Kansas; St. Joseph, Missouri	Southwestern Bell
Sept. 6, 1988	Milwaukee, Racine, Kenosha, Sheboygan, Madison, Janesville, RSA #9 East Central Illinois East Central Illinois Denver and Colorado Springs (integrate systems) Lexington, KY Salem, Ocean and Cumberland Counties, NJ Rockingham, NH Springfield, MA	Ameritech Ameritech US West US West BellSouth Bell Atlantic NYNEX NYNEX
Nov. 14, 1988	Southern Michigan (Detroit/Ann Arbor, Flint, Muskegon, Saginaw, Grand Rapids, Lansing)	Pacific Telesis
Feb. 2, 1989	Mercer, Hunterdon and Warren Counties, NJ Houston and Beaumont, TX Orlando, Melbourne, Daytona Beach, FL Huntsville, AL; Clarksville, TN Duluth and Minneapolis, MN	Bell Atlantic BellSouth BellSouth BellSouth US West
Apr. 6, 1990	Blanket "Me Too" Cellular Waiver	Bell Atlantic (affects all RHCs)
Sept. 12, 1990	Automatic Call Delivery ("ACD") in Chicago/Milwaukee ACD in New Jersey and New England ACD in CA, FL, LA, VA, IN ACD in New York and New England Temporary Intersystem Handoff Waiver	Ameritech Bell Atlantic BellSouth NYNEX All RHCs (ruling disposed of 9 specific requests for intersystem handoff)
Sept. 28, 1990	Intrastate Cellular Exchange Access Services on Untariffed Basis in NJ, PA, DE, MD; waiver for other areas to be granted upon showing that a state will not accept tariffs.	Bell Atlantic
Feb. 15, 1991	Cecil County, MD; Carbon County, PA ACD in New York Extension of Sept. 12, 1990 ACD waivers to all RHCs	Bell Atlantic NYNEX Southwestern Bell



Map 2-12 InterLATA Cellular Waivers Granted by the Court.

Table 2.9. Pending Waiver Requests.

Requestor	DOJ	Court	Description
Pacific Telesis	Sept. 19, 1988		Resell interexchange services to GTE Mobilnet cellular customers.
Ameritech	Jan. 6, 1989		InterLATA 800 service for multiLATA paging.
NYNEX	Mar. 7, 1989	Mar. 15, 1991	InterLATA cellular service in six New York RSAs.
Southwestern Bell	July 18, 1989	Mar. 15, 1991	InterLATA cellular service in RSAs.
Pacific Telesis	Oct. 3, 1989		InterLATA paging origination and access to VSR services.
Bell Atlantic	Oct. 6, 1989		Management and consulting services for other cellular systems.
Southwestern Bell	Dec. 21, 1989		Intersystem handoff and automatic call delivery between Massachusetts and Maine.
US West	Dec. 21, 1989	Mar. 15, 1991	InterLATA cellular service in RSAs.
Ameritech	Dec. 27, 1990		InterLATA service and automatic call delivery in Toledo.
NYNEX	Jan. 16, 1990		InterLATA cellular service between areas of New York and Massachusetts.
Southwestern Bell	Jan. 19, 1990		InterLATA cellular service in Texas.
Bell Atlantic	Jan. 30, 1990	Mar. 15, 1991	InterLATA cellular service in RSAs.
NYNEX	May 21, 1990		InterLATA cellular service between areas of Massachusetts and Connecticut.
Ameritech	July 26, 1990	Mar. 15, 1991	InterLATA integration of RSAs with existing cellular systems in Illinois and Indiana.
US West	Aug. 1, 1990		Cellular service in several Washington and Oregon LATAs and in Canadian cellular areas.
RHCs	Aug. 2, 1990	Mar. 15, 1991	RSA waivers for all RHCs.
NYNEX	Sept. 12, 1990		Resell cellular service in New York RSAs.
Pacific Telesis	Nov. 29, 1990	Apr. 4, 1991	InterLATA cellular service between several Other MSAs.
Southwestern Bell	Dec. 20, 1990		Automatic call delivery.
Bell Atlantic	Jan. 10, 1991		Automatic call delivery.
NYNEX	Jan. 28, 1991		Automatic call delivery.
BellSouth	Jan. 28, 1991		Automatic call delivery.
BellSouth	May 9, 1991		Integrated cellular service in California, Indiana, Virginia, Louisiana, and Florida.
BellSouth	May 9, 1991		Integrated cellular service over an expanded area in Indiana.

By September 1990, the decree court had pending before it numerous requests for interLATA waivers, including a consolidated petition that itemized twenty-two specific requests for permission to provide intersystem handoff, call delivery, or to operate integrated systems across LATA boundaries. The court granted some of these requests, and declined to rule on certain others.[212] The court permitted automatic call delivery (subject to conditions), but only for one, very limited technology and only for certain specific geographical areas. The court also granted a general (but temporary) waiver to permit RHC affiliates to implement intersystem handoff from any of their systems.[213]

In granting these and other such cellular waivers, the court has usually emphasized either "competitive parity"[214] or the "community of interest"[215] in "a single 'metropolitan complex.'"[216] In defining such communities, it has normally emphasized vehicular traffic

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[212]United States v. Western Elec. Co., 1990-2 Trade Cas. (CCH) ¶ 69,177 (1990).

[213]The court directed DOJ "to brief the Court, nine months from the date of this Opinion, on the status of equal access technology for intersystem handoff. The Court will thereafter entertain motions and oppositions for the extension of the one year waiver granted today for that service." 1990-2 Trade Cas. (CCH) at 64,455. As discussed earlier, the court has extended the temporary waiver for an additional year. Memorandum, *United States v. Western Elec. Co.*, No. 82-0192 (D.D.C. Sept. 6, 1991).

[214]The district court has repeatedly concluded that keeping RHC and non-RHC geographic service areas similar in size promotes competitive parity. "[I]f the Regional companies were strictly confined to LATA boundaries in the provision of cellular service," the court has explained, "they would be at a significant competitive disadvantage with the radio common carriers because the latter would be able to provide cellular service to areas as wide as the FCC will allow." 1987-1 Trade Cas. (CCH) at 59,892-59,893. Thus, the court has granted waivers, where necessary to "promote competitive parity between the operating companies and the radio common carriers whose FCC-defined markets were larger than the LATA regions." *Id.* at 59,892; *see also* Memorandum at 4-5, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Sept. 22, 1987); Memorandum at 3-8, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Feb. 15, 1991).

[215]For example, in a 1987 opinion the court stated:

> Whenever the Court has granted waivers, it was essentially in the context of representations that highways and automobile traffic patterns (typically in large metropolitan areas) were such that the public benefits accruing from slight departures from the strict LATA boundaries to accommodate networks with cellular phones were so substantial that they outweighed, on this limited basis, the dangers to fair competition.

673 F. Supp. at 881-882 (footnotes and citations omitted).

[216]The decree court appeared to pin its 1983 decision allowing expanded radio operations on market definition and the "metropolitan complex." As revealed in later filings with the court, that is certainly how DOJ read the opinion. *See, e.g.*, 1987-1 Trade Cas. (CCH) at 59,393 ("The Department of Justice supports the NYNEX request. Its papers assert that the competitive area set forth in the November 1983 decision justifies the waiver sought by NYNEX, reasoning that the provision of such expanded service by NYNEX will, once again, provide integrated and uninterrupted mobile telephone service only within a single 'metropolitan complex.'") (discussing DOJ filing).

patterns, "typically in larger metropolitan areas."[217] The court has yet to acknowledge any other major factors affecting "communities of interest," such as inter-urban highway routes, travel patterns of rental-car customers, gas pipeline routes, or the geographically unbounded movements of the rapidly growing base of customers who own portable phones. The court has thus far declined to grant any blanket geographic waiver for cellular service analogous to the one it granted for paging services in February 1989.[218] The average time between when these cellular waivers were sought and when they were granted was 19 months.[219]

Competitive Implications

From the perspective of the user of radio services, message or call delivery is fast becoming a necessity, not merely an occasional convenience, as call forwarding is for a landline phone. A landline phone can be answered by any number of other people or machines in the home or office when the phone's owner is away; a pager or mobile phone, by contrast, travels with the owner and loses at least half its functionality if jurisdictional or licensing lines prevent messages or calls from being received. Intersystem handoff is likewise a necessity; as one provider of cellular services recently observed, "[l]osing a call just because you travel across an invisible line will not be tolerated by customers."[220] It is now beyond dispute that from the customer's perspective, the market for mobile services is and must be geographically unbounded.

In a September 1988 decision, the court stated that prior mobile waivers had "primarily focused on the community of interest * * * as defined by traffic patterns * * *. [T]he fact that the Court has granted many such waiver requests, does not mean that they may be granted in the absence of a community of interest in what is a single 'metropolitan complex.'" 1988-2 Trade Cas. (CCH) at 64,455 (citations omitted). In that decision, the court accordingly held that for several of the waivers sought, the RHCs had not demonstrated an adequate community of interest.

[217] In a 1989 ruling, for example, the court allowed Bell Atlantic to provide cellular mobile telephone service in three New Jersey counties that were integrally tied to the Philadelphia metropolitan area. Highway, traffic, and other demographic data, the court reasoned, supported the conclusion that these areas were a community of interest. Memorandum, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Feb. 2, 1989) (1989 U.S. Dist. LEXIS 8171).

[218] In the 1987 triennial review, the court refused to remove any restrictions on interexchange services to facilitate the RHCs' participation in mobile services. 673 F. Supp. 525.

[219] One request by Bell Atlantic to provide interLATA cellular service to Cecil County, Maryland was filed on December 13, 1985. It was not granted until February 15, 1991, over 5 years later, despite repeated requests from Bell Atlantic for expedition. *See, e.g.*, Order, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Feb. 15, 1991); Order, United States v. Western Elec. Co., No. 82-0192 (D.D.C. July 19, 1988) (denying motion for expedition).

[220] *Northern Telecom, Motorola Accomplish First Multivendor Cellular Handoff in U.S.*, BUSINESS WIRE, July 11, 1990 (quoting the president of U.S. Cellular Operating Co. of New Hampshire).

Just when and how intersystem coordination is implemented can thus have major competitive implications. All providers must keep pace with continuously expanding customer expectations; customers will not wait patiently with a provider of geographically restricted or higher-priced service when the competition beckons from across the street. Major costs are also at stake. In its initial opinion defining LATA boundaries, the decree court noted that LATAs had to be large enough to prevent "significant inefficiencies."[221] However, LATAs of a size intended to prevent inefficiencies in the landline network -- which is used by almost 100 percent of the population -- may be far too small to prevent inefficiency in the mobile network, which is currently accessible to under 5 percent of residential or business users. Providers that lag significantly in expanding the geographic scope of their service or in controlling the costs of doing so simply cannot remain competitive. Geographic integration and intersystem coordination -- through clustering, consolidation, and smooth intersystem coordination -- is competitively essential.

Equally essential for maintaining competition is that integration be achieved efficiently, with the best technical means available. Some intersystem methods work considerably better than others: the faster the links used for call delivery and intersystem handoff, for example, the more likely it is that a phone will be located or a call in progress maintained without interruption. Major cost savings likewise depend on the flexible switch deployment and consolidation of operations in contiguous service areas. In intensively competitive markets, no provider can long continue to rely on inferior technical methods or inefficient deployment of resources.

The easiest and (up to a point) the most efficient way to expand coverage is to build outward from a single established MTSO. This often makes for much more efficient usage of existing switch capacity; it also completely solves problems of call delivery or intersystem handoff. A similar approach is to place one or more remote switches under the control of a single MTSO. This can be an attractive option for providers operating contiguous licenses, especially when subscribership in newly licensed rural areas is insufficient to justify the cost of a new MTSO. Broader regional integration of course requires more; here the challenge of knitting together multiple switches and billing consumers fairly for expanded service must be confronted in all their complex detail.

Cellular providers not affiliated with the RHCs have of course enjoyed enormous flexibility in searching for efficient, technically superior means of expanding the geographic scope of their service. Ascertaining precisely what choices they have preferred is difficult; some choices will be competitively better than others, and unregulated cellular companies thus do not publicize their preferences if they can help it. All available evidence, however, indicates that cellular providers unaffiliated with RHCs are relying on similar core strategies for geographic expansion.

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[221] United States v. Western Elec. Co., 569 F. Supp. 990, 1004 (D.D.C. 1983); *see also* United States v. Western Elec. Co., 578 F. Supp. 643, 648-649 (D.D.C. 1983) (confining RHC cellular affiliates to LATAs would cause "a substantial loss in the economic efficiencies which could be produced by integrated, multi-LATA systems").

First, they are consolidating contiguous operations wherever possible. This often provides substantial cost savings; it is also the technically simple, direct, and reliable way of meeting demand for expanded-area service.

Second, they use dedicated circuits -- on either their own facilities (microwave links, for example) or the facilities of a single interexchange carrier -- to transport customer information, network control information, paging signals, and calls themselves in call delivery or intersystem handoff. To our knowledge, *none* invite their customers to designate a presubscribed interexchange carrier to carry calls forwarded or handed off from one system to another, let alone to choose which interexchange carrier should convey the information on a receiver's location needed for the most advanced forms of call delivery. Indeed, as discussed in chapter 3, none to our knowledge even offers customers a presubscription choice of long distance carriers for ordinary long distance calls initiated from within the home territory.

Providers of radio services affiliated with the RHCs have of course pursued similar strategies. The one difference -- a difference that has become manifestly anticompetitive -- is that every adjustment in service areas, every consolidation of switches or other facilities, every significant initiative to provide broader intersystem coordination, has first had to overcome obstacles created by the divestiture decree. These obstacles have almost invariably been removed upon request -- but usually after long delay.

Indeed, *every* geographic cellular and paging waiver request submitted to the court through the normal waiver process has been granted,[222] at least in part. It is the waiver process itself that has become anticompetitve. In a rapidly changing market like mobile services, delays of 8 months for paging waivers and 19 months for cellular waivers significantly affect both the development of the market and the ability of the RHCs to compete. In the last 19 months, total cellular subscribership has nearly doubled. *See* TABLE 1.4, *supra*. Nineteen months is thus an eternity in a competitive race and technological revolution of the sort taking place in mobile services. Moreover, the rapidly growing ranks of cellular customers suffer most from the ill-matched competition between RHC and independent. During the average 19-month delay in the provision of competitive services, the consumer who wants multiLATA service, for example, is effectively forced to choose the non-RHC provider.

Insofar as the decree court has applied the "competitive parity" test, the RHCs have been relegated to a me-too status in every competitive race. In cellular most particularly, this has often meant no competition at all; the non-RHC carrier can choose whatever pace it wishes in expanding service coverage, and the RHC affiliate can only follow. While independent cellular providers are busily pursuing their clustering strategies and

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[222] The court has several times denied or remanded to DOJ motions seeking a ruling or temporary waiver from the court without first going through the Department. *See, e.g.*, Order, United States v. Western Elec. Co., No. 82-0192 (D.D.C. July 18, 1988); Memorandum and Order, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Aug. 8, 1988); 1990-2 Trade Cas. (CCH) at 64,451 n.14, 64,464-64,465.

expanding their service areas through the addition of RSAs, the RHCs file their waiver requests with the Department and await the outcome.[223]

[223]With the issuance of RSA licenses, waivers for interLATA cellular service have been requested with new vigor. *See, e.g.*, Motion of the United States for a Waiver to Permit the Bell Operating Companies to Provide InterLATA Cellular Service for Rural Service Areas, *United States v. Western Elec. Co.*, No. 82-0192 (D D C Mar. 15, 1991) (forwarding individual waiver requests of Ameritech, Bell Atlantic, NYNEX, Southwestern Bell and US West and supplemental request of all seven RHCs seeking generic RSA waivers).

3. ANCILLARY SERVICES

A question that has long perplexed economists is to what degree it is efficient and desirable for producers to combine and bundle their services. There is little doubt that it is efficient for shoes to be sold in pairs, not one at a time. It is perhaps less clearly efficient for long distance telephone companies to provide frequent-flyer mileage in cooperation with major airlines; some nevertheless do, and few consumers complain. As a general rule, the question of how much bundling of services is appropriate can be answered only by the competitive process itself, just as it is only competition that can determine whether a cookie belongs on the ice cream sundae, or the razor in the same package as the blades.

In the provision of radio services, it has become increasingly clear that some degree of bundling is competitively desirable and advantageous. This has been most apparent with equipment -- the bundled sale of equipment and radio service has now become the competitive norm. Almost without exception, independent providers of radio services have also chosen to bundle some local, long distance, and information services as well.

Handsets. Cellular handsets are often heavily discounted when purchased in connection with a subscription to a designated cellular carrier, with the buyer committing to some minimum monthly charge for some specified number of months. Indeed, it is now very common for handsets to be priced at two figures -- often hundreds of dollars apart -- the lower figure (sometimes as low as $50) being offered only in conjunction with a subscription for service.[1] Some companies have offered low-cost equipment rentals.[2] The FCC has acknowledged that this has become a widespread, publicly advertised practice, and FCC Chairman Sikes has estimated that consumers save as much as $300 million annually through discounted equipment.[3] According to one report, several FCC officials, including Chairman Sikes, are advocates of "bundling in the cellular market, saying it would benefit consumers and promote competition."[4] The president of the Cellular Telecommunications Industry Association concurs with the FCC, noting that "[c]ellular telephone discounting is the essence of competition, providing increased choices and reduced prices to consumers."[5]

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[1]Sloane, *Consumer's World; Cellular Phone Deals for Alert Buyers*, N.Y. TIMES, Oct. 20, 1990, § 1, at 48.

[2]Dickson, *International Mobile Communications 4; Ardour Cools on Wall Street*, FIN. TIMES, Oct. 15, 1990, at 4 ("In an attempt to woo ordinary consumers, cellular operators have been offering incentives such as * * * cheap equipment rentals.").

[3]Mesmer, *FCC Considers End to Cellular Bundling Ban*, NETWORK WORLD, Feb. 25, 1991, at 9.

[4]*Ibid.*

[5]*Ibid.*

Long Distance Services. For similar reasons, many cellular companies have established exceptionally large "local" (*i.e.*, toll-free) calling areas. For example, one McCaw brochure promises "access to a large local calling area. Larger, in fact, than that of your conventional phone. Cellular has the ability to cross typical toll boundaries."[6] Another offers New York customers its "Wide-Area Local Calling Network," under which "[a]ll calls to any part of area codes 201, 212, 718, 914 and 516 are billed as local calls."[7] GTE likewise touts its "toll-free coverage for the Florida counties of Hillsborough, Pinellas, Pasco, Polk, Sarasota, Manatee and Lee. The area also includes Tampa, Fla."[8] Elsewhere, GTE boasts that its "Triad service [in North Carolina] covers Greensboro, Winston-Salem, High Point, Lexington, Asheboro, Yadkinville and all the surrounding areas. And whenever you call within the [covered] area * * *, *it's always a local call.* You don't pay long distance charges for calls to places within the Cellular One service area, unlike calls placed from your home or office phone."[9]

Smaller cellular companies offer similarly expansive "local" service. SNET Cellular treats the entire state of Connecticut plus the greater Springfield area of Massachusetts as a "local calling area"; its sales brochure declares that such "expanded toll free calling * * * increases the value of [SNET's] cellular service * * *."[10] In 1986, Cellular One of Dayton, operated by Cellular Communications, Inc.,[11] began offering toll-free calling between Dayton, Cincinnati, and Columbus Ohio.[12] In Texas, sales literature for Amarillo Cellular Telephone Company boasts that "Cellular One continues to provide its subscribers with over 5,000 square miles of local calling area over a nine county region."[13] The Syracuse Telephone Company promises "the convenience and savings of an extended local calling area which includes the entire (315) area code and the northern-most portion of area code (607), including Cortland, Ithaca, Lansing and

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[6]McCaw Sales Brochure & Coverage Map for Sacramento, CA (current as of Feb. 1991).

[7]Metro One Advertisement, 47ST. PHOTO 175 (1990).

[8]MOBILE PHONE NEWS, Mar. 29, 1990, at 6.

[9]Cellular One of the Triad (GTE) Sales Brochure for Greensboro, NC (current as of Jan. 1991) (emphasis in original).

[10]SNET Sales Brochure & Coverage Map for Connecticut (Apr. 1989) (brochure entitled *SNET Cellular Announces Expanded Toll Free Calling*).

[11]Pacific Telesis and Cellular Communications are currently involved in a joint venture to operate a regional system in the Upper Midwest consisting of both companies' Ohio and Michigan properties. *PacTel and McCaw Propose to Form Cellular Clusters Through Joint Venture*, BUSINESS WIRE, Aug. 29, 1991.

[12]*Toll Free Calling Comes to Ohio Cities*, DAYTON BUS. J., Apr. 1986, § 1, at 23.

[13]Cellular One of Amarillo Advertisement, ACCENT WEST (Jan. 1991). Elsewhere, the same ad states: "With Cellular One's Amarillo to Lubbock connection, Lubbock is a local call from Amarillo."

Groton."[14] Metrophone likewise promises "the widest toll-free calling area in the Delaware Valley * * *."[15] In some cases, smaller companies have joined together to further expand their "local calling area." For example, in 1988, Metro One and Metro Mobile began promoting their "Metro Connection," "the only uninterrupted automatic five state cellular call service."[16]

These marketing pitches all reflect the same, underlying economics: at 35 or so cents per minute for local "air time," it can be very profitable to throw in a cut-rate long distance landline connection if that's what it takes to attract customers. Boosting usage of a cellular phone is the single marketing imperative; extra marginal revenue for making long distance connections is of course welcome but far from critical. (According to one recent analysis, long distance calls constitute about 5 to 10 percent of a cellular user's bill.)[17] In these circumstances, the incentive is not to overprice the ancillary service, but to underprice it. Or even to give it away for free. In September 1990, for example, Metrophone announced a new service package under which there would be no additional charge for long distance calls of *any* distance made on weekends.[18] Other companies include a designated amount of long distance calling as part of their regular service option,[19] or provide a certain amount of free long distance to any domestic location, as long as the call is placed from the home system.[20] GTE has a similar fee structure for

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[14]Syracuse Telephone Co. Sales Brochure & Coverage Map for Syracuse, NY. Furthermore, the company "has eliminated long distance charges on calls * * * place[d] to those areas." Callers "pay only for [their] airtime." *Ibid.*

[15]*New Metrophone Rate Plans Make Cellular Phones Affordable to Wider Audience*, PR NEWSWIRE, Sept 6, 1990. The P.R. release continues: "The company's coverage area also incorporates portions of New Jersey [extending to Atlantic City] * * * and the state of Delaware."

[16]Metro One/Metro Mobile 88R00888 (Feb. 16, 1988) (radio commercial done by Radio TV Reports, Inc. The commercial explains the benefits of the service: "Just imagine, you're in your car and you start your call from Philadelphia, you hit the Jersey Turnpike to the George Washington Bridge, head through Westchester, and into Connecticut, through Fairfield and on to Hartford and you're still on the same phone call." *Ibid.*

[17]SALOMON BROTHERS INC., CELLULAR COMMUNICATIONS SERVICE INDUSTRY – REPORT (July 22, 1988)

[18]*New Metrophone Rate Plans Make Cellular Phones Affordable to Wider Audience*, PR NEWSWIRE, Sept 6, 1990; Metrophone Sales Brochure & Coverage Map (Nov. 1990) ("[Y]ou'll pay no long-distance charges on weekends when you call destinations in the continental U.S.! You pay only the off-peak local airtime charges.")

[19]*See, e.g.*, Buffalo Telephone Co. Sales Brochure for Buffalo, NY (current as of Dec. 1990) (brochure entitled *Add Up the Savings with Cellular One*). Buffalo Telephone Co. is 50% owned by McCaw. McCAW CELLULAR COMMUNICATIONS, INC., 1990 ANNUAL REPORT 29 (1991).

[20]*See, e.g.*, Albany Telephone Co. Sales Brochure for Albany, NY (no date).

Railfone and Airfone; all charges for domestic calls are by air time only, regardless of the destination called.[21]

Information Services. Many cellular providers have treated information services in similar fashion. In early 1990, for example, Metro One cellular was offering free stock market, sports, traffic, and weather news to its customers in New York and New Jersey.[22] SNET likewise offers a long list of information services at no additional charge,[23] and emphasizes that the service "cannot be dialed from landline phones."[24] In September 1990, Metrophone announced it would offer a free voice mail service.[25] Radiofone offers enhanced features such as call forwarding, call waiting, third party conference, no answer transfer, and voice mailbox free in conjunction with subscription to a monthly service plan.[26] Honolulu Cellular offers "StarCall Oahu," a service that includes free public service call options.[27]

Intersystem Handoff, Call Delivery, Roaming. For similar reasons, most cellular companies have been eager to enter into reciprocal handoff agreements with carriers serving adjacent markets. The real benefit of such arrangements is increased air time, which is, by a wide margin, the key source of revenue.[28] Many providers of cellular

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[21]COMMUNICATIONS DAILY, INC., Oct. 30, 1990, at 9; *GTE Airfone To Install Its Seatfone System on More Than 150 Eastern Airlines Aircraft*, PR NEWSWIRE, Sept. 25, 1990.

[22]COMMUNICATIONS DAILY, Feb. 16, 1990, at 7.

[23]Callers may dial "*INFO" to get further details about SNET services, coverage areas, public safety information, and SNET Cellular news. Free services include time of day, lottery results, emission testing information, Governor's state information bureau, poison control center, DEP violation hotline, Amtrak schedule and information, and Metro North schedule and information. SNET Cellular also offers free retrieval of voice mail messages.

[24]SNET Cellular Sales Brochure & Coverage Map for Connecticut at 5 (May 1989) (brochure entitled *Cellular Service User's Guide*).

[25]*New Metrophone Rate Plans Make Cellular Phones Affordable to Wider Audience*, PR NEWSWIRE, Sept. 6, 1990. As early as 1988, Metrophone provided cellular customers with toll-free road information and weather conditions. Shelly, *Metrophone Sells the Digital Difference*, BUS. DATELINE, May 21, 1990, § 1, at 30.

[26]Radiofone Sales Brochure for Louisiana (current as of Jan. 1991) (listing of monthly service plans). Subscribers who choose the lower use "standard plan" are charged for these enhanced features. *Ibid.*

[27]Honolulu Cellular Sales Brochure & Coverage Map for Hawaii (current as of Jan. 1991) (brochure entitled *Cellular Coverage*). For example, *CGD accesses coast guard search and rescue, *93 reaches KQMQ's radio news, *TRSH connects to the litter hotline, and *PUKA can be used to report potholes.

[28]McCaw has noted, for example, that although nationwide automatic handoff and delivery will take away their edge in making long distance connections, they will nonetheless benefit because of increased overall usage. Hof & Coy, *Step One for Craig McCaw's National Cellular Network*, BUS. WEEK, Oct. 22, 1990, at 108.

service with the regulatory freedom to do so do not charge their customers for handoffs. The billing is simply for an on-going "local" call, and agreements between cellular operators generally provide that all the revenue will go to the operator through which the call was initially connected.

Implementation. While cellular providers have uniformly recognized the advantage of subsidizing or giving away ancillary information or long distance services to customers, they have of course worked simultaneously to minimize the costs incurred in doing so. Many cellular concerns apparently subscribe to cut-rate long distance services offered to large business concerns. Among McCaw's declared corporate objectives, for example, are to "[c]apture long-distance economi[e]s," to "[m]aintain[] [its] long distance intra/ interLATA revenue advantage," and to "[e]stablish network systems * * * [to] [s]upport major multi-market and government accounts with a 'national network.'"[29] Some providers of cellular service avoid (or at least reduce) access charges by bypassing the landline switched network and arranging for direct connection between mobile switches and interexchange carriers.[30] Some cellular companies have installed their own long distance facilities on high-traffic routes.[31] Press reports in late 1990 indicated that British Telecom was considering entering the U.S. long distance telecommunications market in a venture with McCaw, a company in which BT already holds a 20 percent stake.[32]

To our knowledge, no cellular company with the legal freedom to do otherwise offers its customers the option of presubscribing to a preferred long distance carrier. TABLE 3.1. Thus, for example, in May 1989 Cantel contracted to use the Sprint network for all its long distance needs, including its cellular telephone operations.[33] In December 1990, Cellular Inc. signed a similar contract to obtain Sprint's Virtual Private Network service; Cellular Inc.'s subscribers in nine midwestern and western states are connected exclusively to the Sprint network when they dial 1+ calls.[34] A report on *Business Wire* describes this agreement as "part of a growing trend to connect cellular networks with long distance networks."[35] A McCaw sales brochure for Denver notifies subscribers that

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[29]MCCAW CELLULAR COMMUNICATIONS, INC., MCCAW'S GOALS AND VALUES 8-9 (current as of Jan. 1991).

[30]*See, e.g.*, COMMUNICATIONS DAILY, Jan. 27, 1988, at 5 (US West's cellular subsidiary, NewVector Communications, and AT&T Communications announced first direct-connect and billing agreement between cellular company and long distance carrier).

[31]Ignon, *Cellular Group Is Regaining Some Momentum*, INVESTOR'S DAILY, Dec. 20, 1990, at 1 ("As cellular companies have expanded, they have set up relay stations that cut reliance on conventional telephone lines to handle long-distance calls.").

[32]*BT/McCaw for US Long-Distance?*, FINTECH MOBILE COMMUNICATIONS, Oct. 25, 1990.

[33]*US Sprint Announces Significant Multi-year Agreement with Cantel Net*, BUSINESS WIRE, May 8, 1989.

[34]*US Sprint Upgrades Network for Cellular Inc.*, BUSINESS WIRE, Dec. 13, 1990.

[35]*Ibid.*

its "system works with technologies developed by AT&T, the people who pioneered cellular."[36] An ad for McCaw's affiliate in New York also promises use of "AT&T fiber optic service."[37] And, although GTE itself is subject to equal access requirements on its landline network, that requirement has not been extended to its cellular operation. GTE Mobilnet, the second largest cellular provider in the country, thus operates just like McCaw, the largest. When they dial 1+, GTE's cellular customers have their long distance calls connected on a network of GTE's choice.[38]

Table 8.1. Long Distance Services Offered by Various Cellular Companies.

Company	Primary Long Distance Carrier	Method to Access Other Carriers
McCaw Cellular Communications, Inc.	AT&T	'0' and access codes
GTE Mobilnet, Inc.	AT&T	'0' and access codes
Contel Cellular, Inc.	AT&T	'0' and access codes
Contel Cellular Co.	Sprint	
Century Telephone Enterprises, Inc.	AT&T	'0' and access codes
Vanguard Cellular Systems, Inc.	AT&T	'0' and access codes
Radiofone	AT&T	'0' and access codes
Associated Communications	AT&T	'0' and access codes
Honolulu Cellular Telephone	AT&T	
C-TEC Mobile Services	AT&T	'0' and access codes
Comcast Cellular Corp.	AT&T	
Cellular Inc.	Sprint	

Sources: Telephone interviews with company sales representatives (Feb. 1991); *US Sprint Announces Significant Multi-Year Agreement with Contel Net*, Business Wire, May 8, 1989; *US Sprint Upgrades Network for Cellular Inc.*, Business Wire, Dec. 13, 1990.

[36]McCaw-Cellular One Sales Brochure & Coverage Map for Colorado (current as of Jan. 1991).

[37]Metro One Advertisement, 47ST. PHOTO 175 (1990).

[38]*See, e.g.*, Cellular One of the Triad (GTE) Sales Brochure & Coverage Map for Greensboro, NC (current as of Jan. 1991) (noting that 1+ calls are connected through AT&T and billed directly by GTE).

Without exception, so far as we have been able to ascertain, cellular companies have likewise used microwave links,[39] leased lines, or high-volume services (like AT&T's Megacom[40] or MCI's Prism) to provide intersystem links within the "supersystems" they are establishing.[41] Customers are billed at rates equal to or below landline retail rates established by AT&T. Cellular providers offer ancillary information services (voice mail, traffic reports, and so on) in much the same way, using dedicated servers with no attempt to offer equal access to outside information providers at the cellular switch.

Why have such approaches been favored so consistently by cellular companies, both large and small? Several different factors come into play. With intersystem handoff, for example, technical considerations preclude presubscription. But these considerations aside, another factor is simply fairness to customers. A landline caller gets clear advance notice from dialing the code that he is placing a "long distance" call; a mobile caller could (so to speak) inadvertently dial "1+" by driving, flying, boating, or walking across some invisible line half way through a call. The simplest, most satisfactory solution all around is for cellular operators to buy low-cost, dedicated links for conducting intersystem handoff, and cover their costs with the additional usage of air time that intersystem handoff will promote. With information services, dedicated servers may make economic sense simply because of economies of scope, or because some cellular operators are well-positioned to provide the services that their customers want. With long distance services, there are obvious economies in buying the service wholesale rather than retail. Ironically, many cellular operators are under little pressure to pass on the savings to consumers because they compete with an RHC carrier that is not permitted to compete in similar fashion.[42]

The fact remains, however, that the cellular operator's dominant financial incentive is to increase air time, which will usually mean offering customers the broadest possible array of ancillary services at the lowest possible cost. And whatever range of dedicated

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[39]When RHC affiliates have purchased non-wireline properties, they have repeatedly been forced to divest or abandon links of this kind already in operation.

[40]One report notes that AT&T's Megacom service is targeted to large customers who log at least 1,000 hours of interLATA use a month. *See* Leffers, *Long-Distance Competitors Battle for WATS Market*, Bus. J. – Milwaukee, May 5, 1986, § 1, at 8.

[41]As a recent market study by Salomon Brothers reported: "The cost of the long distance portion of a cellular call was traditionally passed-through to the cellular subscriber at no profit to the carrier wirelines. More recently, however, nonwireline carriers have begun to purchase long distance capacity in bulk, priced at a discount, while charging customers the retail rate." Salomon Brothers Inc., Cellular Communications Service Industry – Report (July 22, 1988).

[42]*See, e.g.*, Request of BellSouth Corp. for a Waiver to Allow BellSouth Mobility Inc. to Provide Cellular Mobile Telephone Service Across LATA Boundaries in the State of Florida at 9-10, United States v. Western Elec. Co., No. 82-0192 (DOJ Sept. 15, 1989) (The non-RHC cellular provider is not "forced by competition to maintain its prices at a level near its costs. This is because it has a price 'umbrella' that is equal to the [RHC affiliate's] charges plus average toll charges among points within the interconnected systems.").

services a cellular operator may supply directly, its customers will also enjoy access to the full array of competitive information and long distance services, including 976 and 900 services, transactional services, data bases, and other on-line services of every description. Virtually all cellular switches now interconnect to the landline network as full-fledged end offices. Whatever owned or leased facilities a company like McCaw or Centel may utilize for completing 1+ long distance calls, a cellular subscriber can still readily access a preferred long distance carrier by dialing 10-XXX+.[43] The same is true for information services. Equal access is in effect around the landline switches, and mobile switches are interconnected on a fully equal basis with the landline network. For all practical purposes, cellular customers therefore enjoy access to a full array of information and long distance services whether or not the mobile provider is subject to equal access requirements at the cellular switch.

Competitive Implications

It is a well-accepted matter of antitrust theory that absent additional regulatory oversight, and absent other restraining forces, a monopolist subject to rate-of-return regulation will have an economic incentive to extend its market power into adjacent markets and thus capture monopoly profits outside its monopoly operations. But it is equally well-established in economic theory that if already competitive markets are to remain efficient, producers and consumers must remain free to package and bundle services with considerable flexibility. It would not be procompetitive to require that cars be sold unbundled, without batteries or tires; such a requirement would simply promote inefficiency and inconvenience.

Competition in the provision of radio services, and in the provision of ancillary services bundled with them, is protected four times over, by well-established and longstanding FCC policies, and by basic market forces. First, the Commission allocates spectrum to competing providers of radio services, and guarantees equal interconnection with the landline exchange. This in itself guarantees equal access to all other providers of ancillary services that interconnect directly with the landline exchange. Second, the FCC and most state commissions impose no rate regulation on the provision of radio services; this eliminates any incentive to leverage market power into adjacent markets. Third, there is no market power to leverage; the provision of radio services is in fact highly competitive. Fourth, radio services themselves are the principal source of value; the clear economic imperative for all providers is to lower the price of ancillary (and comparatively cheap) equipment, long distance circuits and information services to encourage maximum usage of the service itself.

By extending equal access requirements beyond the landline bottleneck and into the middle of the highly competitive market for radio services, the decree court has

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[43] Syracuse Telephone Company, for example, explains to subscribers that if they "wish to use an alternative long distance service, [they] simply enter the access code and number as [they] would from any telephone." Syracuse Telephone Co.-Cellular One Sales Brochure for New York.

placed definite limits on important aspects of competition between RHC affiliates and other providers of radio services.[44] Other providers are free to assemble attractive packages of services, and almost all do so very aggressively. If bundling of this kind were contrary to consumer interests, one would expect a wholesale flight of customers from other providers to the more strictly regulated RHC affiliates. No such flight has occurred. And judging from their advertising pitches, independent providers of radio services have concluded from their market research that some degree of bundling of these services is in fact very attractive to many consumers.

It is impossible to quantify the anticompetitive impact from the double layering of equal access requirements on RHC providers alone. There is reason to suppose, however, that it is fairly significant. In their sales brochures, providers of cellular service not subject to these requirements place great emphasis on their expanded "local" calling areas, and their discounted or free long distance services. Unless these providers completely misunderstand their customers and markets, these highly touted aspects of cellular service must be competitively important. To that same extent, the decree restrictions on the provision of ancillary services by RHC radio affiliates are directly anticompetitive.

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[44]The FCC, by contrast, continues to reject any similar requirements, or indeed to accept that LATA boundaries have any relevance whatsoever to the Commissions' mission of promoting the public interest in the development of mobile services. *See, e.g., In re* Application of New York SMSA Ltd. Partnership, 58 Rad. Reg. 2d (P & F) 525, 530 (June 20, 1985) ("We express no view as to whether the operation of these three systems as an integrated whole is in compliance with the MFJ or requires a waiver; that determination is left to the Department of Justice and District Court. Our concern is not with enforcement of the MFJ but rather with public interest considerations."). This has become a standard declaration in FCC opinions. *See also In re* Application of Bell Atlantic Mobile Systems of Philadelphia, Inc., 61 Rad. Reg. 2d (P & F) 141, 143 (Sept. 26, 1986).

4. OUTLOOK

Competition in the provision of mobile services has proved considerably more robust than many had predicted. In 1967, as the FCC prepared to allocate two new frequency pairs for paging (one of each pair for wirelines, one for non-wirelines),[1] it raised the question "would the public interest better be served by not making any assignment of these frequencies to wireline carriers?"[2] Not surprisingly, many non-wireline carriers answered that question in the affirmative, arguing that if allowed to participate in the paging market, the telcos would manipulate the rates and terms of interconnection to stifle competition.[3] The FCC rejected those arguments, however, and concluded that wireline carriers should be allocated paging spectrum along with others.[4] The non-wirelines immediately returned to the Commission, contending that allocation of spectrum to wireline carriers would "eliminate[] * * * the competitive market of one-way paging services * * * by granting A.T.&T. the opportunity to monopolize [the] market."[5]

Similar arguments were made for cellular services. Some opponents of wireline participation repeatedly argued that allowing the wirelines to offer cellular services would "have a fatal effect on competition,"[6] lead to "domination" of the market by AT&T,[7] "prove in effect to be a grant to the Bell System of monopoly power over the urban radio telephone market,"[8] and "cause irreversible injury to the competitive cellular marketplace and to the public interest" and "raise significant barriers to entry."[9] Others argued -- somewhat at cross purposes -- that, in light of the telephone companies' investment and

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[1]Amendment of Part 21 of the Commission's Rules With Respect to the 150.8-162 Mc/s Band to Allocate Presently Unassignable Spectrum to the Domestic Pub. Land Mobile Radio Serv. by Adjustment of Certain of the Band Edges, 9 F.C.C.2d 659 (1967).

[2]*Id.* at 664.

[3]Amendment of Part 21 of the Commission's Rules With Respect to the 150.8-162 Mc/s Band to Allocate Presently Unassignable Spectrum to the Domestic Pub. Land Mobile Radio Serv. by Adjustment of Certain of the Band Edges, 12 F.C.C.2d 841, 846-847, *reconsideration denied*, 14 F.C.C.2d 269 (1968), *aff'd sub nom.*, Radio Relay Corp. v. FCC, 409 F.2d 322 (2d Cir. 1969).

[4]*Id.* at 848-849, 852.

[5]14 F.C.C.2d at 269.

[6]An Inquiry Into the Use of Bands 825-845 MHz & 870-890 MHz for Cellular Communications Sys 36 F.C.C.2d 469, 557 (1981) (comments of Southern Pacific Communications Co.).

[7]An Inquiry Into the Use of Bands 825-845 MHz & 870-890 MHz for Cellular Communications Sys 89 F.C.C.2d 58, 74 (1982).

[8]RAM Broadcasting Co. v. FCC, 525 F.2d 630, 635 (D.C. Cir. 1976) (footnotes omitted).

[9]Application of New York SMSA Ltd. Partnership, FCC File No. 27014-CL-L-84, slip op. ¶¶ 2, 4 (June 19 1984).

incentives, they would not "vigorously pursue" mobile advances,[10] that they would "have the incentive to limit the uses for cellular systems to those that impinge least on their established investment and to control exchange access for the same reason,"[11] that they would "hinder cellular development,"[12] and that they would not "truly compete" in the mobile market, for fear of harming their wireline telephone service.[13] Some argued that "local exchange telephone companies will have the potential to forestall other competitors by using predatory pricing tactics or misallocating the shared costs of cellular and conventional wireline service,"[14] while others claimed that wireline participation would cause "prices [to] be maintained at artificially high levels."[15]

The decree court has frequently heard similar arguments. Since 1983, the court has granted over sixty waiver requests for cellular and paging services. Before these waivers were granted, there were predictions of "crippling competitive disadvantage," and of "seriously impede[d] competition,"[16] of "competitive harm" that would prove "immediate, direct and irreversible."[17] Competitors complained that RHC affiliates would imminently "achieve a permanent, insurmountable and unfair competitive advantage."[18] They anticipated that "competition would be seriously impaired."[19] There were predictions of

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[10]89 F.C.C.2d at 61 (comments of Millicom).

[11]86 F.C.C.2d at 539 (comments of Southern Pacific Communications Co.).

[12]*Id.* at 550 (comments of DOJ).

[13]89 F.C.C.2d at 67 (comments of Telocator, Industrial, and Millicom).

[14]86 F.C.C.2d at 493.

[15]Application of New York SMSA Ltd. Partnership, slip op. ¶ 4. The self-serving nature of some of these comments is perhaps most blatantly revealed by the opponents of the wirelines' participation in dispatch communications. Big Rock Communications argued that if the FCC permitted the wirelines to provide dispatch communications on cellular systems, "the competition cellular systems would bring would be disastrous. Permitting dispatch service will cause owners of trunked systems to lose millions of dollars." 86 F.C.C.2d at 519. No mention is made here of whether consumers would benefit from the lower cost and better service provided by cellular systems.

[16]Metro Mobile's Memorandum in Opposition to Motion and Proposed Order for a Waiver of Section II(D) of the Modification of Final Judgment at 21-22, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Oct. 15, 1986).

[17]Letter from Fisher, Wayland, Cooper & Leader on behalf of Cellular Telephone Co.; Fortas & Hardman on behalf of American Cellular Network Corp., Long Branch Cellular Telephone Co., and New Brunswick Cellular Telephone Co.; and Fleishman & Walsh on behalf of Bridgeport Cellular Co. to Nancy C. Garrison, DOJ at 3 (June 25, 1985).

[18]Comments of Cellular Telephone Co. at 12, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Mar. 15, 1985).

[19]*Id.* at 16.

"a devastating impact on marketing competition * * *."[20] Similar objections were even directed against extra-territorial *local* services by RHC affiliates.[21]

None of these prophecies has been realized. The FCC's competitive policies for paging have indeed proved so successful that in 1984 the Commission knocked down its thirty-year-old licensing "fence" for local paging services. The Commission recognized that its policy of splitting licenses between telco affiliates and others -- originally designed to give the others a fighting chance -- had outlived its usefulness, and now operated only to give telco affiliates a sheltered advantage.[22] While the fence remains in place for cellular services, robust competition has clearly developed here too. Some non-wireline carriers started at a disadvantage because of the licensing headstart enjoyed by wirelines.[23] The non-wirelines have, nonetheless, steadily narrowed the initial 100 percent gap in market share. The largest cellular operator in the nation, by quite a large margin, is McCaw. GTE/Contel ranks second. RHC affiliates have proved to be nothing worse than vigorous competitors in a highly competitive and rapidly growing market.

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[20]Comments of the Washington/Baltimore Cellular Telephone Co. on Request of Bell Atlantic Mobile Systems for Waivers of Section II(D) of the Modification of Final Judgment at 6, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Jan. 15, 1986).

[21]For example: "Metro Mobile submits that there exists a substantial possibility that NewVector's proposed entry into the San Diego local exchange market, outside of its region, would impede the development of competition between cellular telephone exchange providers and in the local exchange market as a whole." Opposition to Motion for Authorization Pursuant to Modification of Final Judgment to Authorize NewVector Communications, Inc. to Own and Operate a Cellular Radio System in San Diego, California at 12, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Dec. 31, 1985); Metro Mobile CTS, Inc.'s Comments in Opposition to Motion and Proposed Order for a Waiver of the MFJ at 10, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Mar. 20, 1986)

[22]Elimination of the Separate Frequency Allocation Structure in the Pub. Land Mobile Serv., 99 F.C.C.2d 311 (1984). As the Commission explained:

> The fence was established to create and foster competitive alternatives to the wireline carriers. Today, the non-wireline carriers have proliferated, providing real competition with the wireline carriers, and artificial restraints are no longer necessary. Indeed, the existence of the fence may have the effect of restraining the growth of non-wireline carriers, thus lessening the competitive pressure on wireline carriers. In a robust, competitive market, regulatory intervention should be minimal or nonexistent.

Id. at 317 (footnote omitted). Based on similar reasoning, the FCC had two years earlier refused to apply the dual allocation scheme to wide-area services. Amendment of Parts 2 & 22 of the Commission's Rules to Allocate Spectrum in the 806-941 MHz Band & to Establish Other Rules, Policies & Procedures for One-Way Paging Stations in the Domestic Pub. Land Mobile Radio Serv., 89 F.C.C.2d 1337, 1344-1345 (1982) (the "regulatory constraint [of dual licensing] is no longer necessary for achieving our [competitive] goals")

[23]The FCC's resale policies were specifically designed to offset this advantage. 86 F.C.C.2d at 511

Competitive Markets

All projections indicate that rapid growth will continue to characterize the market for mobile services. Urban sprawl steadily increases the distance covered by daily commuters. The average commute today is estimated to be about 10 to 15 miles, but many commuters travel much larger distances.[24] The volume of business travel also rises year by year. Between 1985 and 1990, corporate travel increased 48 percent.[25] Today, over thirty million Americans go on over 150 million business trips every year.[26] And of the more than 800 occupations identified by the U.S. Census Bureau, 130 -- totaling about 50 million people -- may involve the kind of daily travel that would make mobile communications desirable.[27] There is thus a great reservoir of untapped demand to begin with. The supply of reliable and affordable mobile services is likely to create still more demand. Telecommunications services, unlike almost all others, create new communities of interest, by offering new ways to interact. As Contel noted in its 1988 annual report, "[m]arket projections indicate that the cellular telephone industry will continue to experience a high level of growth well into the next century."[28]

A comparison with the experience of other countries buttresses the conclusion that there is still much room for growth. Long known as the most mobile society in the world, the United States nevertheless lags behind several other nations in its use of paging services, and behind several more in its use of cellular services. TABLES 4.1, 4.2. To what extent this lag may be due to different regulatory and antitrust policies in the United States and abroad cannot be ascertained.

Nonetheless, demand for mobile services in the United States will continue to expand rapidly, and radio spectrum will be available to meet the growing demand. The genius of cellular telephony is that a system's carrying capacity can be expanded almost indefinitely by shrinking the size of cells. The conversion from analog to digital systems is also likely to increase carrying capacity by a factor of three or more in the short term, and much more in the longer term. McCaw has already set January 1992 as its target date to begin its transition to digital.[29]

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[24]Yates, *Dear Commuter: Pay Up!*, WASHINGTON POST, Apr. 23, 1989, at W39; Hmielecki, *Researcher Calls GM Sunrace a "Setup"*, UNITED PRESS INT'L, July 20, 1990.

[25]Frellick, *Survival Tips for Travelers*, FORTUNE, Nov. 5, 1990, at 155.

[26]*Metrocast; Business Travel Hits All-Time High as 35 Million Americans Take Business on the Road*, BUSINESS WIRE, Jan. 9, 1989.

[27]Wood, *There's No Escaping Beepers*, CHICAGO TRIBUNE, Mar. 18, 1990, at 20.

[28]CONTEL, 1988 ANNUAL REPORT 14 (1989). The following year, Contel projected over 20 million cellular subscribers by 1998. CONTEL, 1989 ANNUAL REPORT 13 (1990).

[29]MCCAW CELLULAR COMMUNICATIONS, INC., CELLULAR COMMUNICATIONS: A VISION OF THE FUTURE 6 (Oct. 20, 1989).

Table 4.1. Radio Paging Market, 1990.

Country	Penetration (%)
Austria	1.05
Belgium	1.02
Denmark	.89
Finland	.80
France	.42
Germany	.34
Hong Kong	12.00*
Iceland	.47
Ireland	.18
Italy	.14
Japan	3.74
Luxembourg	.69
Netherlands	1.85
Norway	1.82
Portugal	.06
Singapore	10.00*
Spain	.10
Sweden	1.44
Switzerland	.55
United Kingdom	1.16
United States	3.72

Sources: *Mobile Communications Guide to European Subscribers to Mobile Systems*, FINTECH MOBILE COMMUNICATIONS, Jan. 31, 1991; Roscoe & Wysor, *Survey Shows Strong Growth in Paging Industry*, TELOCATOR, June 1990, at 14 (estimating 9.3 million U.S. paging subscribers by the end of 1990); *Cellular Phones Get Even Smaller in the Booming Japanese Market*, FINTECH MOBILE COMMUNICATIONS, Sept. 27, 1990 (as of August 1990, there were 4.63 million paging subscribers in Japan); *Rapid Development in Hong Kong's Telecommunications*, XINHUA GENERAL OVERSEAS NEWS SERV., Dec. 6, 1990 (estimating over 700,000 radio paging subscribers in Hong Kong); *MTEL Completes Joint Venture Agreement with Singapore Telecom*, PR NEWSWIRE, Nov. 21, 1989.

* Estimate.

Table 4.2. Cellular Telephone Subscribers by Country, 1990.		
Country	Launch	Penetration (%)
Australia	12/86	1.38*
Austria	11/84	.95
Belgium	4/87	.45*
Denmark	1/82	2.90
Faroe Islands	1/89	2.45
Finland	3/82	4.55
France	11/85	.51
Germany	9/85	.35
Hong Kong	1984	1.92*
Iceland	7/86	2.00
Ireland	12/85	.62
Italy	9/85	.38
Japan	1979	.53
Netherlands	1/85	.55
New Zealand	8/87	1.44*
Norway	11/81	4.84
Singapore	8/88	1.67*
Spain	6/82	.27
Sweden	10/81	5.68
Switzerland	9/87	1.89
United Kingdom	1/85	1.99*
United States	1983	2.11

Sources: *Mobile Communications Guide to European Subscribers to Mobile Systems*, FINTECH MOBILE COMMUNICATIONS, Jan. 31, 1991; CTIA, DATA SURVEY THROUGH DECEMBER 1990, at 1 (1991) (5.28 million cellular subscribers in the U.S.); *Cellular Phones Get Even Smaller in the Booming Japanese Market*, FINTECH MOBILE COMMUNICATIONS, Sept. 27, 1990 (as of August 1990, there were 650,000 cellular subscribers in Japan); EMCI, WORLD CELLULAR MARKETS 1991, at 143-146, 162 (Feb. 1991).

* Estimate.

Meanwhile, the FCC is also making new spectrum available for radio services of various kinds. Soon to arrive on the U.S. market (and already on the market in Britain) are two-way paging systems, capable of acknowledging the receipt of messages and transmitting return data, including low-speed fax.[30] Bridging the capabilities of current cellular and one-way pagers, two-way paging systems will offer new competition to both

[30]Kawney, *The Clever Pager That Answers Back; A Two-way System Will Solve the Problem of Missing Messages*, THE INDEPENDENT, Nov. 5, 1990, at 16.

services.[31] As of March 1991, the Commission had also issued 45 experimental licenses to test "personal communications networks" ("PCNs") and other personal phone technologies and services. PCNs serve "microcells" on microwave frequencies with very small, low power, digital transmitter-receivers to provide mobile service over small areas -- an office building or neighborhood.[32] Millicom, for example, will construct PCN networks in Houston, Texas and Orlando, Florida.[33] The system will have handoff capabilities, and will of course connect to the switched telephone network.[34] McCaw is involved in the development of personal communications networks in Orlando,[35] and in April 1991, the company acquired exclusive rights to a new PCN system in five west coast areas.[36] Interexchange carriers such as LiTel Telecommunications Corp. have also begun developing experimental PCN systems as "a powerful alternative to traditional telephone service." LiTel's customers will be able to directly access "long-distance service via digital radio waves," thus bypassing the local telco.[37] One industry analyst predicts continuing allocation of spectrum for personal communications and notes that as a result, "[a]dded

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[31]FCC licenses in the 150 and 450 MHz ranges permit two-way paging as well as other two-way uses. Most are still currently used for one-way services, but the FCC sees "a strong possibility that two-way digital, data applications, and confirmatory paging services will increase in the near future." *See* 47 C.F.R. § 22.501(b); Flexible Allocation of Frequencies in the Domestic Pub. Land Mobile Serv. for Paging & Other Servs., 4 FCC Rcd 1576, 1580 (Feb. 15, 1989).

[32]*See, e.g.*, TELECOMMUNICATIONS REPORTS, Mar. 25, 1991, at 43; Amendment of the Commission's Rules to Establish New Personal Communications Services, 5 FCC Rcd 3995, 3998, (June 28, 1990); Experimental Actions, FCC Rep. No. 286 (Jan. 24, 1991) (1991 FCC LEXIS 416); Experimental Actions, FCC Rep. No. 255 (Jan. 24, 1991) (1991 FCC LEXIS 418); FCC Rep. No. 253 (Nov. 2, 1990) (1990 FCC LEXIS 5956). Experimental Actions, FCC Rep. No. 252 (Aug. 3, 1989) (1990 FCC LEXIS 4171). The FCC has stated its intention to "[B]roadly define personal communications services and make available an adequate amount of spectrum to foster the development of innovative and competitive markets for these services" and has tentatively decided to allocate microwave frequencies for this purpose. Policy Statement and Order Amendment of the Commission's Rules to Establish New Personal Communications Services, No. 90-314 (Oct. 25, 1991) at 2; *see also* Amendment of the Commission's Rules to Establish New Personal Communications Services, 5 FCC Rcd 3995 (June 14, 1990).

[33]Millicom Applications for Personal Communications Networks, FCC Rep. No. GN-57 (May 10, 1990) (1990 FCC LEXIS 2999). Millicom proposed to offer "voice and data services on a network of portable wireless, telephones connected through base stations serving 'microcells,' i.e., a cell as small as 600 feet in diameter." *Id.* at *1.

[34]*Id.* at *1-*2.

[35]*McCaw Announces Plan to Test New Personal Communications Services in Orlando and Seattle* PR NEWSWIRE, Sept. 27, 1990.

[36]*McCaw Cellular Communications Purchases Rights to AccessPlus*, BUSINESS WIRE, Apr. 17, 1991

[37]*LiTel to Test Wireless PCN Service via Fiber Backbone Network*, FIBER OPTIC NEWS, Sept. 10, 1990 at 2; *LiTel Telecommunications Awarded FCC License to Test First Phase of Revolutionary PCN Service*, PR NEWSWIRE, Aug. 22, 1990.